REMARKS

Claims 1-4, 9, 11, 14, and 16-39 are pending in this application, with claim 15 being cancelled and claim 39 being newly presented for examination by this Amendment. Claims 1-4, 9, 11, and 14-38 currently stand rejected, and claims 1, 11, and 14 have been amended. Reconsideration and allowance of claims 1-4, 9, 11, and 14-39 are respectfully requested in light of the preceding amendments and following remarks.

Priority Documents

The Examiner acknowledges no claim to priority for this application in the August 1 Office Action. Applicants respectfully request the Examiner acknowledge receipt of the priority documents for this application or indicate which priority documents have not yet been received.

Claim Rejections – 35 U.S.C. § 101

Claims 1-4, 9, 11, 14, 15, 20-22, and 24-26 stand rejected under 35 U.S.C. § 101 for being directed to a recording medium storing nonfunctional descriptive material. Applicants respectfully traverse this rejection for the reasons detailed below.

With regard to claims 1 and 11, the Examiner alleges that the claims recite data structures imparting no function to a structure such as a computer. Data structures, recited as recorded on a computer readable medium,

constitute statutory subject matter if they impart function to a computer. Applicants respectfully submit that MPEP § 2106.01 states the following:

> In this context, "functional descriptive material" consists of ***data structures*** and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited music, literary works and a compilation or mere arrangement of data.

Applicants thus submit that data structures recorded on a computer readable medium may constitute statutory subject matter. MPEP § 2106.01 further states:

> Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, [In re Warmerdam,] 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

In view of the above, a more detailed discussion of In re Lowry is warranted.

Claim 1 of the patent at issue in In re Lowry recites:

> 1. A memory for storing data for access by an application program being executed on a data processing system, comprising:

> ***a data structure stored in said memory, said data structure including information resident in a database used by said application program and including;***
>
> a plurality of attribute data objects stored in said memory, each of said attribute data objects containing different information from said database; a single holder attribute data object for each of said attribute data objects, each of said holder attribute data objects being one of said plurality of attribute data objects, a being-held relationship existing between each attribute data object and its holder attribute data object, and each of said attribute data objects having a being-held relationship with only a single other attribute data object, thereby establishing a hierarchy of said plurality of attribute data objects; a referent attribute data object for at least one of said attribute data objects, said referent attribute data object being nonhierarchically related to a holder attribute data object for the same at least one of said attribute data objects and also being one of said plurality of attribute data objects, attribute data objects for which there exist only holder attribute data objects being called element data objects, and attribute data objects for which there also exist referent attribute data objects being called relation data objects; and an apex data object stored in said memory and having no being-held relationship with any of said attribute data objects, however, at least one of said attribute data objects having a being-held relationship with said apex data object.

In finding that the printed matter cases have no factual relevance to the claims at issue in In re Lowry, the court stated:

> Nor are the data structures analogous to printed matter. Lowry's ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships within a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.

In re Lowry, at 1034. The court further noted:

> Indeed, Lowry does not seek to patent the Attributive data model in the abstract. Nor does he seek to patent the content of information resident in a database. ***Rather, Lowry's data structures impose a physical organization on the data***.

Id. (emphasis added). And, on the issue of abstract ideas, the Federal Circuit in In re Lowry noted:

> More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory. According to Lowry, ***the data structures provide tangible benefits: data stored in accordance with the claimed data structures are more easily accessed, stored, and erased***. Lowry further notes that, unlike prior art data structures, Lowry's data structures simultaneously represent complex data accurately and enable powerful nested operations. ***In short, Lowry's data structures are physical entities that provide increased efficiency in computer operation***.

Id. at 1035 (emphasis added).

Claims 1 and 22 as amended are analogous to the claims in In re Lowry, and as such are statutory subject matter. Unlike the claims of In re Warmerdam, the claims of the subject application do not recite mathematical equations, or the generation of data structures using mathematical equations. Rather, as in In re Lowry, the claims as amended recite a "computer readable medium **storing** an **executable** data structure" that dictates how application programs structure and manage data. Accordingly, because the recited computer readable medium stores a data structure for "managing reproduction" with a "reproduction apparatus," the claims are directed toward a computer readable medium storing functional descriptive material. Put in the language of MPEP § 2106.01, the claims are directed to a claimed computer readable medium storing a data structure defining structural and functional interrelationships between the file areas and the computer software and

hardware components which permit the directory's functionality to be realized, and is thus statutory.

In light of the above, Applicants respectfully request that the rejection of claims 1-4, 9, 11, 14, 20-22, and 24-26 under 35 U.S.C. § 101 be withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 1-4, 9, 11 and 14-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US Pat Pub 2002/0046328 to Okada ("Okada") in view of US Pat 5,742,569 to Yamamoto ("Yamamoto"), US Pat Pub 2001/0043790 to Saeki et al. ("Saeki"), US Pat Pub 2001/0038745 to Sugimoto ("Sugimoto"), and Official Notice. Applicants respectfully traverse this rejection for the reasons detailed below.

With regard to claim 1, the Examiner alleges that Sugimoto discloses a "second navigation unit . . . including at least one identifier for identifying one channel of the multi-channel stream" Applicants respectfully submit that Sugimoto does not teach this element, and, futher, that Sugimoto and Saeki are not combinable with Okada under § 103(a).

Sugimoto's FIG. 45 illustrates entry points (ENTRY POINT) for a number of cells mapping to various VOBs. Claim 25 recites that the identifier in the second navigation unit identifies "**one channel of the multi-channel stream**." Applicants respectfully submit that the entry points of Sugimoto identify only places within a cell where reproduction of cell content may begin; Sugimoto suggests nothing of the entry points identifying individual channels in a stream.

See Sugimoto, ¶¶ [0682]-[0684]; FIG. 45. Thus, Sugimoto does not teach or suggest the identifiers of the second navigation units as recited in claim 25 by its generic cell entry points.

Applicants respectfully reiterate that the combination of Okada and Saeki or Sugimoto is impermissible under § 103(a). The navigation information described in Okada is completely different from the navigation information described in Saeki and Sugimoto, both in function and hierarchy placement. For example, FIG. 44 of Okada illustrates a management table 150. Applicants submit that replacing the management table 150 described in Okada with the navigation information described Saeki or Sugimoto at the various levels recited in the claims would amount to a complete redesign and functional change of Okada, since none of the features shown in management table 150 clearly correspond to the data management file shown in FIG. 9 of Saeki or the cells shown in FIG. 45 of Sugimoto. Such a reconstruction, without some teaching as to its feasibility or desirability, is not permissible under § 103(a). *See* MPEP § 2141(III); KSR v. Teleflex, 550 U.S. ____, slip. op. 04–1350, p. 13 (2007) (when looking at variations in prior art elements, a finding of non-obviousness turns on whether "the improvement is more than the predictable use of prior art elements according to their *established functions*") (emphasis added).

Neither Yamamoto, Saeki, Sugimoto, nor Official Notice complementarily cure the disclosure and suggestion deficiencies of Sugimoto, discussed above. Because Okada, alone or in combination with Saeki, Sugimoto, and Official

Notice, fails to teach or suggest each and every element of claim 1 and cannot be combined or modified to do so, these references cannot anticipate or render obvious claim 1. Claims 11, 16-19, and 23 are allowable over the applied references at least for reciting the same unique features missing from each reference discussed in connection with claim 1. Claims 2-4, 9, 14, 15, 20-22, and 24-38 are allowable at least for depending from an allowable base claim. Withdrawal of the rejections under 35 U.S.C. § 103(a) to claims 1-4, 9, 11 and 14, and 16-38 is respectfully requested.

New Claim 39

Claim 39 is newly presented for examination by this Amendment. Applicants respectfully submit that claim 39 reads on and finds support under 35 U.S.C. § 112 in example embodiments described in paragraph [0040] of the specification as filed. Applicants further submit that the definition of a map recited therein, that the "map includes point information including position-related presentation time data of the associated one of the multiple reproduction paths" is not disclosed by any of the art of record. Particularly, Saeki discloses a map including only an address and time offset data for particular video objects; no presentation time data of the associated reproduction path or stream is disclosed. Thus, claim 39 is at least allowable for depending from an allowable base claim and further allowable for reciting unique map definitions not found in the applied art. Applicants respectfully request consideration and allowance of claim 39.

Examiner Interview Requested

Applicants thank the Examiner for granting previous interviews in connection with this and related applications. Applicants would like to conduct a further interview on this application and related applications 10/176,369 and 10/810,635, all of which have submitted responses pending examination and for which prosecution is still open. Applicants will be contacting the Examiner regarding this request; however, the Examiner is urged to contact Applicants should she take up the current response in any of these applications for examination before such interview has been scheduled.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and allowance of each of claims pending in this application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Ryan Alley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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